

CLAIMS

WHAT IS CLAIMED IS:

1. A reflector assembly for use in a digital projector, comprising:
a reflector including a reflector opening, and
a startup element fixedly coupled to said reflector, wherein said reflector and said startup element are configured to allow a replaceable coupling of a lamp assembly to said reflector assembly.
2. The assembly of claim 1, wherein said startup element comprises a coil.
3. The assembly of claim 1, wherein said startup element comprises a shield.
4. The assembly of claim 1, further comprising a potential coupler configured to couple said startup element to a potential source.
5. The assembly of claim 4, further comprising:
a structural element coupled to said reflector and said startup element;
wherein said potential coupler runs along said structural element.
6. The assembly of claim 4, wherein said potential coupler comprises a structural element for supporting said startup element.
7. The assembly of claim 1, further comprising a latching assembly configured to engage a lamp header of said lamp assembly.
8. The assembly of claim 1, wherein said reflector comprises a parabolic reflector.

9. The assembly of claim 1, wherein said reflector comprise an elliptical reflector.

10. A light generation assembly for a digital projector, comprising:
a reflector assembly including a reflector having a reflector opening, and
a startup element permanently coupled to said reflector; and
a lamp assembly replaceably coupled to said reflector assembly.

11. The assembly of claim 10, wherein said lamp assembly is configured to be separately replaced, without replacing said startup element.

12. The assembly of claim 11, wherein an outer diameter of said lamp assembly is disposed within an inner diameter of said startup element after said lamp assembly is coupled to said reflector assembly.

13. The assembly of claim 12, wherein said startup element is removably coupled to a distal end of said lamp assembly such that said startup element is positioned sufficiently close to said lamp assembly to lower an initial ionization potential of said lamp assembly when a potential is applied to said starting element.

14. The assembly of claim 12, wherein said startup element is removably coupled to a proximal end of said lamp assembly such that said startup element is positioned sufficiently close to said lamp assembly to lower an initial ionization potential of said lamp assembly when a potential is applied to said startup element.

15. The assembly of claim 10, wherein said lamp assembly comprises an ultra-high pressure lamp.

16. The assembly of claim 10, wherein said startup element is configured to reduce an initial ionization potential of a lamp portion of said lamp assembly, said startup element capacitively coupled to said lamp portion when said lamp assembly is coupled to said reflector assembly.

17. The assembly of claim 16, wherein said startup element is configured to generate ultraviolet (UV) light in said lamp assembly;
wherein said UV light reduces said initial ionization potential.

18. A method of using a lamp assembly for use in a digital projector, comprising:
replaceably coupling a lamp assembly having a lamp to a reflector assembly, wherein said reflector assembly includes a startup element permanently coupled thereto;
activating said startup element to lower an initial ionization potential of said lamp; and
activating said lamp.

19. The method of claim 18, further comprising removing said lamp assembly after said lamp has surpassed its useful life.

20. The method of claim 19, further comprising removing said lamp assembly from said reflector assembly without removing said startup element.

21. The method of claim 18, wherein activating said startup element comprises applying a potential to said startup element to generate ultraviolet (UV) light.

22. The method of claim 18, wherein coupling said lamp assembly to said reflector assembly comprises passing a distal end of said lamp through an

opening defined in said reflector assembly and positioning said distal end of said lamp within said startup element.

23. A method of forming a reflector assembly used in digital projectors, comprising:

affixing a startup element to a reflector; and

coupling a latching assembly to an opening defined in said reflector wherein said startup element and said latching assembly cooperate to allow replaceable coupling of a lamp assembly to said reflector assembly.

24. The method of claim 23, wherein said startup element comprises a startup coil.

25. The method of claim 23, further comprising coupling a wire to said startup element wherein said wire is configured to couple said startup element to a potential source.

26. The method of claim 25, further comprising:

coupling a structural element to said reflector for supporting said startup element;

wherein said wire runs along said structural element.

27. The method of claim 25, wherein said wire comprises a structural element configured to support said startup element.

28. The method of claim 23, wherein said latching assembly is configured to engage a lamp header of said lamp assembly.

29. The method of claim 23, wherein said reflector comprises a parabolic reflector.

30. The method of claim 23, wherein said reflector comprise an elliptical reflector.

31. A light generation assembly, comprising:
means for generating light;
means for reflecting said light;
means for lowering an initial ionization potential required to generate said light; and
means for coupling said means for reflecting light and said means for lowering the initial ionization potential required to generate said light such that said means for generating light may be replaced without replacing said means for lowering ionization potential.

32. The assembly of claim 31, wherein said means for generating light comprises an ultra high pressure lamp.

33. The assembly of claim 31, wherein said means for lowering the initial ionization potential required to generate said light comprises a startup element.

34. The assembly of claim 33, wherein said startup element is coupled to a distal end of said means for generating light.